

Mississippi and *The Meg*

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In the September 1997 issue of the MDEQ Office of Geology's journal *Mississippi Geology*, I reviewed two novels published just months apart on an extinct giant shark reappearing in modern waters to scar us all. The article was entitled "The Science of *Extinct* and *Meg*: two books, two southern writers, one idea." Charles Wilson of Brandon, Mississippi, and Steve Alten of southern Florida published successful novels about the Miocene-Pleistocene shark species *Carcharodon megalodon* rising from deep ocean trenches and devouring people. The sharks of Alten's *Meg* wreaked havoc in the Pacific realm, while those of Wilson's *Extinct* terrified residents along Mississippi's own Gulf Coast.

The rule of thumb for the size of *Carcharodon* sharks is one inch in slant height of anterior teeth equals 10 feet in length. Large fossil *C. megalodon* teeth attracted the attention of seventeenth century Europe, where they were called glossopetra, or stone tongues (*glossa*, Latin from Greek for tongue;



Figure 1. *Carcharodon megalodon* on left from the Miocene of South Carolina and *Carcharodon angustidens* on right from the Late Eocene Moodys Branch Formation in Jackson, Mississippi.

petra, Latin from Greek for rock). According to Bob Purdy of the U. S. National Museum, the *megalodon's* (me-gal'-o-don, not meg'-a-lo-don) geologic range is from the Middle Miocene 15 million years ago to the Early Pleistocene 1 million years ago.

Figure 1 compares the size of a medium-size *C. megalodon* tooth from the Miocene of South Carolina to a tooth of *Carcharodon angustidens* from the Late Eocene of Jackson, Mississippi. The slant length of the *C. angustidens* tooth shown in Figure 1 and the diagram in Figure 2 is 3.53 inches, equivalent to a 35-foot long shark. The length of the *C. megalodon* tooth is 4.5 inches, equivalent to

a 45-foot long shark. Some *C. megalodon* teeth measure over 7 inches, equivalent to a 70-foot long shark.

So, what would a 70-foot long *C. megalodon* shark look like? As shown in the images of Figure 3, the movie *The Meg*, an adaptation of Alten's 1977 book, does a great job of bringing this extinct shark species to life and showing how it could challenge our dominion of the ocean. It creates a version of *Jaws*, with a much larger shark (which turns over a much larger shark-hunting boat) and adds some humor in the mix.

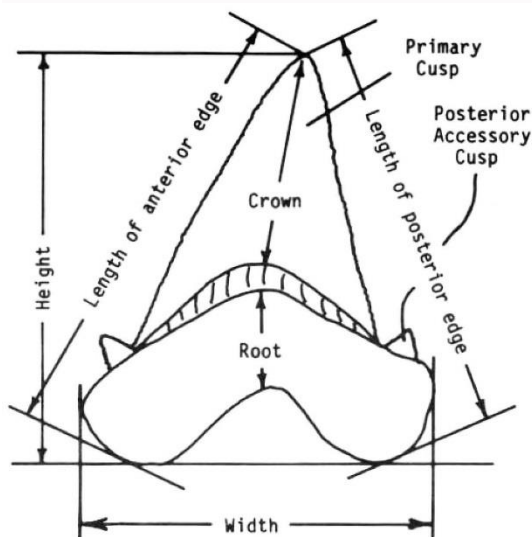


Figure 2. Diagram showing how measurements are made on the upper tooth of *Carcharodon angustidens* in lingual view.

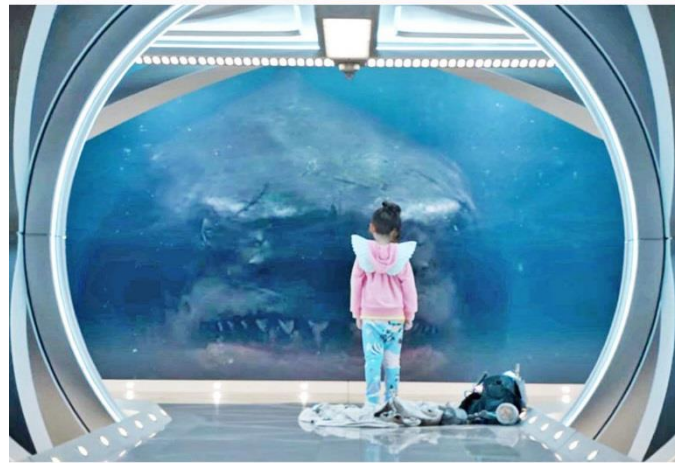
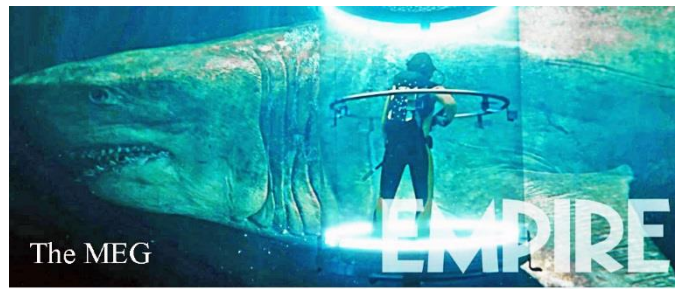


Figure 3. Scenes from the movie *The MEG*.